

Terms of Reference Format for SCAR Groups

NAME OF GROUP

SCAR-Fish, Strategic Working group on Fisheries and Aquaculture Research

RATIONALE OF THE GROUP

Europe is a maritime continent. At 22 million km², the Exclusive Economic Zone (EEZ) of the European Union (including EU overseas territories) is the largest in the world. Additionally, Europe is rich in fresh water bodies, mainly lakes and rivers, some of them transnational in nature. In 2017, the EU Blue Economy directly employed more than 4 million people, generating €658 billion of turnover and €180 billion in gross value added. Almost half of the EU population lives less than 50 km from the sea; the majority is concentrated in urban areas along the coast. Ocean and sea basins and inland waters are connected as a global ecosystem and dynamic economic space. Underpinning Europe's approach to developing the Blue Economy is sustainable use, i.e. support the implementation of the ecosystem approach, and responsibility for maintaining marine integrity and productivity, growth along the value chain, societal wellbeing and cohesion. Seas and Oceans food systems ´ should be developed throughout a blue circular Bioeconomy approach. Europe's food security already critically depends on ocean resources in the supply of fish protein, minerals and renewable energy. Innovation has led to better technologies for farming, catching and preservation techniques that guarantee a higher quality of the raw material. However, there is enough reason to monitor and steer this process of transition closely in order to prevent the existing precarious balance in the marine ecosystem of seas and oceans from declining further.

Fishing and aquaculture, activities producing raw material for food and feed, are areas where the incorporation of the innovation developed by biotechnology and other enabling technologies, such as ICT, automation, and new materials, is extremely important.

Seen from a blue circular economy perspective the expected activities (described in the *cluster on food and natural resources, Horizon Europe*) are ambitious and diverse, and cover a wide range of research disciplines and industries. They address the capacity to observe, tackle challenges and explore opportunities both on land and in sea and oceans, many of which are interlinked; and to provide integrated views, and system-wide solutions that covers the production and utilisation of resources from both terrestrial and aquatic systems.

REVISED MANDATE AND RULES OF PROCEDURE

1 Mission

SCAR-Fish is a strategic group of DG-RTD inside SCAR, the Strategic Committee on Agriculture Research, with focus on research and innovation activities in the domain of fisheries and aquaculture. Our mission is to maintain a network that creates the necessary critical mass to contribute to define EU research and innovation priorities, Missions and Partnerships within the Horizon Europe, the Common Fisheries Policy (CFP), Marine Strategy Framework Directive (MSFD), Marine Spatial Planning (MSP), the Biodiversity Strategy, the Water Framework Directive, the Green Deal (including the Farm to Fork Strategy), the Bioeconomy Strategy, the Food 2030 Policy Blueprint, the Circular Economy Action Plan, the BioEast Initiative.

This network will rely on interdisciplinarity to address the sustainability triangle of environmental protection, economic competitiveness and social acceptability, by sharing information between Member States/Horizon Europe Program associated countries, including observers from funding agencies, research organizations (ICES, EFARO), intergovernmental platforms such as JPI Oceans, policy makers, the industry (EATiP), NGO's (Eurogroup for Animals), with a view to identifying common priorities which could lead to coordinated or joint initiatives in the domains above.

2 Organisation and rules of procedure

2.1 Coordination - Chair and Vice Chair – a rotating scheme

The SCAR-Fish group is coordinated by a chair and a vice chair. It was agreed that there should be a rotation of the chair between Member States/ countries associated to Horizon2020 and in future Horizon Europe. A MS/Associated Country will agree to chair SCAR-Fish for a 12- month period. The Chair will be responsible for guiding the work and organize (with the facilitation of the Commission) and chair 3 to 4 consecutive meetings.

A Vice Chair will also be agreed, of a different MS/AC origin, and will work closely with the Chair for that 12 month period, replacing the chair in his/her functions on mutually agreed occasions or in justified absences of the chair and being responsible for the report of the meeting. When the chairs term of office finishes, the Vice Chair will become the Chair and a new Vice Chair will be agreed by the group.

2.2 Participants

SCAR-Fish is open, as appropriate, to all EU-Member States and Horizon 2020 and future Horizon Europe-Associated Countries Ministries with interests in fisheries and/or aquaculture R&D. Each MS will nominate up to three delegates that will be present as formal representatives of their country and not as individual experts, ensuring appropriate coordination with national SCAR liaisons and representatives in other groups working in fisheries and aquaculture in an EU context, namely STECF, Advisory Councils and ad-hoc groups, e.g. groups working on future partnerships. The group is also attended by observers of external organizations active in the blue bioeconomy.

DG-RTD facilitates SCAR-Fish in its operation. In particular, it facilitates the Chair and vice-chair in the preparation (meeting rooms) of meetings, including the archiving of documents (agenda, presentations,

Terms of Reference Format for SCAR Groups

minutes etc.) on CIRCABC and has an important role as a liaison to representatives of (new) MS, the European Commission (DG MARE, DG Environment) and other organisations.

A list with active members and organisations will be uploaded in the SCAR-Fish website and in CIRCABC.

2.3 Sub-groups

SCAR-Fish may set up sub-groups to deal with questions relevant to its work programme, with a clear purpose and limited time of duration.

2.4 Meetings

SCAR-Fish shall meet 3 to 4 times per year, preferably by teleconference. Meetings can also take place in the premises of the EC or the facilities of a MS in Brussels and at different MS and Associated Countries or in the premises of an observer organisation. Whenever possible, these last meetings will be organised as one-day meetings and held in conjunction with other relevant meetings, workshops, or conferences. Additional activities may include workshops (jointly organised with other initiatives or SCAR groups) and on-site visits in the MS allow participants to witness good examples.

Agenda:

A minimum of 20 working days in advance of the meeting the agenda items and their contents shall be suggested by all the delegates. A provisional agenda shall be drawn up by the chair and sent to the group up to 15 working days before the meeting, together with any relevant documents related to the agenda items. The agenda will be approved in the beginning of each meeting.

Minutes:

Minutes of meetings will be prepared by the vice-chair up to 10 working days after each meeting and submitted to the chair for approval with DG RTD in copy. The minutes shall then be distributed to the group to comments.

Correspondence:

All correspondence to the group shall be addressed by e-mail to the chair c.c. the vice-chair and DG RTD. Conversely, all correspondence from SCAR-Fish to the delegates shall be addressed by the chair c.c. the vice-chair and DG RTD.

2.5 Reporting

SCAR-Fish reports to SCAR Plenary and Informs SCAR SG though a two-page report yearly produced. The different scientific reports, the ToR and the workplan will be published on the SCAR-Fish website.

2.6 Timeline

Date of Terms of Reference to be approved by SCAR Plenary on the 30th of June.
Duration of the next Mandate: June 2020- June 2023.

Terms of Reference Format for SCAR Groups

A work plan will be made bi-annually and presented to the SCAR Steering Group for discussion and approval.

2.7 Resources

Resources from MS are basically all in kind (time of (co-)chair and taskforce members, of all other members); additional resources should be sought to support the organisation of workshops, facilitation of special working formats, drafting of deliverables (especially when more complex inputs need to be processed) and allow for the reimbursement of external experts, as well as for commissioning of desk studies where appropriate.

3 Terms of Reference

Duration of the next Mandate: *June 2020- June 2023*

- To forge a strong linkage between MS and Associated Countries Ministries in charge of fisheries and aquaculture (in oceans, sea and fresh water) and the European Commission (DG Research & Innovation, DG MARE, DG Environment), by developing and implementing strategic approaches and actions for timely advice on R&I activities.
- To ensure that R&I are properly addressed between MS and Associated Countries, on a long term basis, to achieve a cost effective system of R&I effort in the areas of fisheries and aquaculture aligned with the previous mentioned Policies, Directives and Strategies.
- To provide evidence-based information on R&I needs to advise R&I policy-makers so that they can design and implement efficient and effective fisheries and aquaculture R&I initiatives and policy at EU and national levels.
- To collate existing information and where necessary collect new information in the areas of foresight and common research agendas with other SCAR groups, e.g. the SCAR- Foresight, Strategic Working Groups, namely SCAR Agriculture Knowledge and Innovation Systems (AKIS), Food Systems and Bioeconomy; and Collaborative Working Groups, mainly Animal Health & Welfare (AHW).

4 Work Plan

The work plan will be bi-annual with the possibility for adjustments after one year. The work plan should have ongoing synergies with policy frameworks such as the CFP, the MSFD and the Bioeconomy Strategy; and should be aligned with the activities of other SCAR groups, ICES, EFARO, EATiP, Eurogroup for Animals, intergovernmental platforms such as JPI OCEANS, and relevant ERANET Co-funds such as the Blue Bio Cofund.

4.1 Planned activities and expected results and outputs

The Covid19 pandemic is generating high disruptions on all economic sectors, including fisheries and aquaculture. Major challenges are the need for increased level of food self-sufficiency; the reduction of waste; the increased traceability from capture/production to consumption; and the support to marine-related jobs, mainly among coastal communities, decisively contributing to local economies.

There are a set of other challenges too, such as: a positive public perception, evidence-based governance, limited environmental interactions, better control and efficiency, alternative feed ingredients, promotion of animal welfare, adaptation measures to climate change.

In the EU, 65% of the seafood supply is imported, mainly from Asian countries. Transforming our food system into a more productive and sustainable version will inevitably involve better exploitation of the potential of the seas and oceans. By increasing current aquaculture production and promoting the use of alternative bio-resources for food or feed through either harvesting or cultivating, the food self-sufficiency rate can be strengthened without affecting the ecosystem beyond its carrying capacity, and with a low climate footprint.

Activity A: the development of sustainable aquaculture production technologies

A research topic of high priority is the development of sustainable production technologies, e.g. recirculation systems for more efficient water use, digitalization for better control and higher predictability, new cage concepts for operation in exposed sea areas. Cultivation of multiple species in a confined ecosystem, using the principles of IMTA integrated multi-trophic aquaculture, can be an appropriate tool to balance the nutrient in- and output, and thus has the potential to become one of the most resource efficient and low impact production systems for sustainable food production. Another topic should deal with offshore aquaculture, which will allow us to enhance food supply by increasing space for aquaculture. There are challenges as engineering, monitoring, research on optimal species and environmental sustainability.

We propose SCAR-Fish activity to investigate the needs on MS R&I ranging from intensive aquaculture systems, like RAS, to very extensive systems like IMTA, listing species associations, the way they are integrated and cultivation conditions, emphasizing their role in increasing the production of food and raw materials in a circular ecosystem-based way. We also propose to assess current offshore facilities, synergies with other industries and to define the main problems and the research gaps.

Terms of Reference Format for SCAR Groups

Activity B: Implementation of the Biodiversity Strategy in the aquatic domain, questions?

Implementation of the recent Biodiversity Strategy has the potential to affect future fisheries both positively and negatively. The strategy opens up a range of questions in order to ensure maximal impact of implemented measures. Also, in some aspects solutions to implement need to be developed.

We propose SCAR-Fish activity to investigate the questions that need to be addressed in MS and assess if new R&I actions are needed, for instance related to the setup of ecological corridors to prevent genetic isolation; to the role of protected areas in the preservation and restoration of carbon-rich ecosystems and fish spawning and nursery areas; to fisheries-management measures in protected areas according to clearly defined conservation objectives and on the basis of the best available scientific advice; to the contribution of enhancement (eco-engineering) in the mitigation of the impact of multiple pressures degrading the habitats and ecosystems.

Activity C: The potential of the digital transformation in fisheries and aquaculture.

A key enabler for reaching the Green Deal objectives is the leverage of the potential of the digital transformation. Fisheries and aquaculture are activities where the incorporation of the innovation developed by digital technologies such as artificial intelligence, 5G, cloud and edge computing and the internet of things, can greatly contribute improve the design and operation of capturing and processing systems. This will offer our societies prospects for sustainable food security related to marine resources, enabling increased traceability from capture to consumption, ensuring transparency and validation of good practices within the local industry, policy makers and civil societies.

We propose SCAR-Fish activity to investigate the needs and opportunities to include MS research and innovation in these areas to fisheries and aquaculture, in particular in monitoring these activities, enabling the preservation, restoration and sustainable use of natural resources, ecosystem services and the related value chain.

4.2 Risk and risk mitigation

- Lack of resources in some MS/AC for a more active participation.
Mitigation: investigate funding possibilities from a SCAR CASA successor or a similar type of support measure
- Small group of MS/AC being actively involved.
Mitigation: actively search for new members and motivate them to participate
- Urgent policy matters not foreseen during the planning of the mandate necessitate a diversion from the work plan.
Mitigation: Group is flexible and can react to upcoming policy matters. Adjustments of the (draft) work plan during the mandate are expected and will be discussed with the group members. If necessary, major changes will be discussed with the SCAR Steering Group and/or the Plenary.